

The embodiments of the invention in which an exclusive privilege or property is claimed are defined as follows:

1. A method for suppressing pathogenic cells comprising the step of exposing the pathogenic cells to an effective amount of a nitric oxide source.

2. The method as claimed in claim 1 wherein the pathogenic cells are pathogenic microorganisms.

3. The method as claimed in claim 2 wherein the microorganisms are selected from the group comprised of pathogenic bacteria, pathogenic parasites and pathogenic fungi.

4. The method as claimed in claim 3 wherein the microorganisms are pathogenic mycobacteria.

5. The method as claimed in claim 4 wherein the pathogenic mycobacteria is *M. tuberculosis*.

6. The method as claimed in <sup>claim 1</sup> ~~claim 1, 2, 3, 4 or 5~~ wherein the nitric oxide source is nitric oxide.

7. The method as claimed in claim 6 wherein the exposing step is comprised of directly exposing the pathogenic cells to the nitric oxide.

8. The method as claimed in claim 7 wherein the nitric oxide has a cidal effect on the pathogenic cells.

9. The method as claimed in claim 8 wherein the exposing step is comprised of exposing the pathogenic cells to a gas comprised of the nitric oxide and wherein the concentration of the nitric oxide in the gas is at least about 25 parts per million.

10. The method as claimed in claim 8 wherein the exposing step is comprised of exposing the pathogenic cells to a gas comprised of the nitric oxide and wherein the concentration of the nitric oxide in the gas is less than about 100 parts per million.

5 11. The method as claimed in claim 10 wherein the concentration of the nitric oxide in the gas is between about 25 and 90 parts per million.

12. The method as claimed in claim <sup>9</sup>~~9, 10 or 11~~ wherein the pathogenic cells are exposed to the gas for a time period of at least about 3 hours.

10 13. The method as claimed in claim 12 wherein the pathogenic cells are exposed to the gas for a time period of between about 3 and 48 hours.

14. A method for treating an animal having pathogenic cells in the respiratory tract of the animal comprising the step of delivering by the inhalation route to the respiratory tract of the animal an effective amount of a nitric oxide source.

15. The method as claimed in <sup>claim 1</sup>~~claim 15~~ wherein the pathogenic cells are pathogenic microorganisms.

16. The method as claimed in claim 15 wherein the microorganisms are selected from the group comprised of pathogenic bacteria, pathogenic parasites and pathogenic fungi.

17. The method as claimed in claim 16 wherein the microorganisms are pathogenic mycobacteria.

18. The method as claimed in claim 17 wherein the pathogenic mycobacteria is *M. tuberculosis*.

19. The method as claimed in claim <sup>14</sup>~~14, 15, 16, 17 or 18~~ wherein the nitric oxide source is nitric oxide.

20. The method as claimed in claim 19 wherein the animal is a human.

21. The method as claimed in claim 19 wherein the delivering step is comprised  
5 of directly exposing the pathogenic cells in the respiratory tract of the animal to the nitric oxide.

22. The method as claimed in claim 21 wherein the nitric oxide has a cidal effect on the pathogenic cells.

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23. The method as claimed in claim 22 wherein the animal is a human.

24. The method as claimed in claim 22 wherein the delivering step is comprised of delivering a gas comprised of the nitric oxide by the inhalation route to the  
15 respiratory tract of the animal and wherein the concentration of the nitric oxide in the gas is at least about 25 parts per million.

25. The method as claimed in claim 22 wherein the delivering step is comprised of delivering a gas comprised of the nitric oxide by the inhalation route to the  
20 respiratory tract of the animal and wherein the concentration of the nitric oxide in the gas is less than about 100 parts per million.

26. The method as claimed in claim 25 wherein the concentration of the nitric oxide in the gas is between about 25 and 90 parts per million.

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*a* 27. The method as claimed in claim <sup>24</sup>~~24, 25 or 26~~ wherein the animal is a human.

*a* 28. The method as claimed in claim <sup>24</sup>~~24, 25 or 26~~ wherein the gas is delivered to the respiratory tract of the animal for a time period of at least about 3 hours.

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29. The method as claimed in claim 28 wherein the gas is delivered to the respiratory tract of the animal for a time period of between about 3 and 48 hours.

30. The method as claimed in claim 29 wherein the animal is a human.

31. The use of an effective amount of a nitric oxide source for suppressing  
5 pathogenic cells exposed thereto.

32. The use as claimed in claim 31 wherein the pathogenic cells are pathogenic  
microorganisms.

10 33. The use as claimed in claim 32 wherein the microorganisms are selected from  
the group comprised of pathogenic bacteria, pathogenic parasites and pathogenic  
fungi.

15 34. The use as claimed in claim 33 wherein the microorganisms are pathogenic  
mycobacteria.

35. The use as claimed in claim 34 wherein the pathogenic mycobacteria is *M.*  
*tuberculosis*.

20 36. The use as claimed in claim <sup>31</sup>~~31, 32, 33, 34 or 35~~ wherein the nitric oxide source  
is nitric oxide.

37. The use as claimed in claim 36 wherein the pathogenic cells are directly  
exposed to the nitric oxide.

25 38. The use as claimed in claim 37 wherein the nitric oxide source has a cidal  
effect on the pathogenic cells directly exposed thereto.

30 39. The use as claimed in claim 38 comprising the use of a gas comprised of the  
nitric oxide, wherein the concentration of the nitric oxide in the gas is at least about  
25 parts per million.

40. The use as claimed in claim 38 comprising the use of a gas comprised of the nitric oxide, wherein the concentration of the nitric oxide in the gas is less than about 100 parts per million.

5 41. The use as claimed in claim 40 wherein the concentration of the nitric oxide in the gas is between about 25 and 90 parts per million.

42. The therapeutic use of an effective amount of a nitric oxide source for the treatment by the inhalation route of an animal having pathogenic cells in the  
10 respiratory tract of the animal.

43. The therapeutic use as claimed in claim 42 wherein the pathogenic cells are pathogenic microorganisms.

15 44. The therapeutic use as claimed in claim 43 wherein the microorganisms are selected from the group comprised of pathogenic bacteria, pathogenic parasites and pathogenic fungi.

20 45. The therapeutic use as claimed in claim 44 wherein the microorganisms are pathogenic mycobacteria.

46. The therapeutic use as claimed in claim 45 wherein the pathogenic mycobacteria is *M. tuberculosis*.

25 47. The therapeutic use as claimed in claim <sup>42</sup>~~42, 43, 44, 45 or 46~~ wherein the nitric oxide source is nitric oxide.

48. The therapeutic use as claimed in claim 47 wherein the animal is a human.

30 49. The therapeutic use as claimed in claim 47 wherein the pathogenic cells in the respiratory tract of the animal are directly exposed to the nitric oxide.

50. The therapeutic use as claimed in claim 49 wherein the nitric oxide has a cidal effect on the pathogenic cells directly exposed thereto.

51. The therapeutic use as claimed in claim 50 wherein the animal is a human.

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52. The therapeutic use as claimed in claim 50 comprising the use of a gas comprised of the nitric oxide, wherein the concentration of the nitric oxide in the gas is at least about 25 parts per million.

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53. The therapeutic use as claimed in claim 50 comprising the use of a gas comprised of the nitric oxide, wherein the concentration of the nitric oxide in the gas is less than about 100 parts per million.

54. The therapeutic use as claimed in claim 53 wherein the concentration of the nitric oxide in the gas is between about 25 and 90 parts per million.

55. The therapeutic use as claimed in claim ~~52, 53 or 54~~ wherein the animal is a human.

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56. A pharmaceutical composition for use in the treatment by the inhalation route of an animal having pathogenic cells in the respiratory tract of the animal, the pharmaceutical composition comprising an effective amount of a nitric oxide source.

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57. The composition as claimed in claim 56 wherein the pathogenic cells are pathogenic microorganisms.

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58. The composition as claimed in claim 57 wherein the microorganisms are selected from the group comprised of pathogenic bacteria, pathogenic parasites and pathogenic fungi.

59. The composition as claimed in claim 58 wherein the microorganisms are pathogenic mycobacteria.

60. The composition as claimed in claim 59 wherein the pathogenic mycobacteria is *M. tuberculosis*.

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61. The composition as claimed in claim ~~56, 57, 58, 59 or 60~~ wherein the nitric oxide source is nitric oxide.

62. The composition as claimed in claim 61 wherein the animal is a human.

10 63. The composition as claimed in claim 61 wherein the pathogenic cells in the respiratory tract of the animal are directly exposed to the nitric oxide.

64. The composition as claimed in claim 63 wherein the nitric oxide has a cidal effect on the pathogenic cells directly exposed thereto.

65. The composition as claimed in claim 64 wherein the animal is a human.

66. The composition as claimed in claim 64 comprising a gas comprised of the nitric oxide, wherein the concentration of the nitric oxide in the gas is at least about 25 parts per million.

67. The composition as claimed in claim 64 comprising a gas comprised of the nitric oxide, wherein the concentration of the nitric oxide in the gas is less than about 100 parts per million.

25 68. The composition as claimed in claim 67 wherein the concentration of the nitric oxide in the gas is between about 25 and 90 parts per million.

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69. The composition as claimed in claim ~~66, 67 or 68~~ wherein the animal is a human.